WHAT IS CLAIMED IS:

1.   A method of providing differentiated service, comprising at least one of differentially monitoring resource consumption associated with information management within an information management system, differentially monitoring system performance associated with information management within an information management system, or a combination thereof.

2.   The method of claim 1, wherein said method further comprises differentially monitoring one or more system performance parameters associated with information management within an information management system.

3.   The method of claim 1, wherein said method further comprises providing said differentiated service in an information management system having a plurality of processing engines that are distributively interconnected.

4.   The method of claim 3, wherein said information management system comprises a content delivery system, and wherein said plurality of processing engines comprise a system management processing engine, a storage management processing engine, and an application processing engine.

5.   The method of claim 3, wherein said information management system comprises a network endpoint information management system.

6.   The method of claim 3, wherein said information management system comprises a network endpoint content delivery system.

7.   The method of claim 3, wherein said information management system comprises:

        a deterministic system architecture comprising a plurality of processing engines that are distributively interconnected; and

        a differentiated service infrastructure in communication with said operating system.

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8.   The method of 7, wherein said system further comprises an operating system in communication with said deterministic system architecture; wherein said deterministic system architecture further comprises deterministic system software in communication with said operating system and having state knowledge of at least one of resource utilization within said architecture, system performance parameters within said architecture, or a combination thereof; and wherein said method further comprises using said deterministic system software to deterministically control interaction between said distributively interconnected processing engines in response to communication received from said operating system in order to dynamically adjust information management processing behavior based on at least one of said monitored resource consumption, monitored system performance, or a combination thereof.

9.   The method of claim 8, wherein said method further comprises differentially monitoring at least one of said resource consumption, system performance, or combination thereof based at least in part on one or system service parameters associated with said information management; and dynamically adjusting information management processing behavior to bring system resource consumption into adherence with said one or more system service parameters.

10.   The method of claim 7, wherein one or more of said processing engines comprises a monitoring agent capable of monitoring resource consumption within said processing engine, performance within said processing engine, or a combination thereof; and wherein said method further comprises using said monitoring agent to monitor resource consumption within said processing engine, monitor performance within said processing engine, or a combination thereof.

11.   The method of claim 9, wherein said deterministic system architecture further comprises a system monitor in communication with said monitoring agent; and wherein said method further comprises:

using said system monitor to communicate with said monitoring agent so as to monitor resource consumption within said processing engine, monitor performance within said processing engine, or a combination thereof; and

using said system monitor to perform system management based on at least one of said monitored resource consumption, monitored performance, or a combination thereof.

12. The method of claim 9, wherein said system architecture supports system calls to OS-extensions to determine one or more characteristics associated with one or more of said processing engines; wherein said characteristics comprise at least one of resource utilization parameters, system performance parameters, or a combination thereof; and wherein said method further comprises differentially monitoring said characteristics by making system calls to OS-extensions.

13. The method of claim 12, wherein said system further comprises at least one application in communication with said operating system; and wherein said method further comprises differentially monitoring said characteristics by using said application to make calls into said operating system indicative of the availability of necessary resources in said system architecture to support information management.

14. The method of claim 12, wherein said operating system is capable of direct deterministic communication with said deterministic system architecture, and wherein said method further comprises using said operating system to make calls indicative of the availability of necessary resources in said system architecture to support said information management.

15. The method of claim 13, further comprising a deterministic system BIOS that provides a communication interface between said system architecture and said operating system, said deterministic system BIOS capable of managing system calls made to processing engines of said system architecture from said at least one application.

16. The method of claim 15, wherein said deterministic system BIOS is capable of responding to application requests for resources with availability information, rerouting information, or SLA choice information.

17. The method of claim 7, wherein said method further comprises using said differentiated service infrastructure to at least one of differentially monitor said resource

consumption associated with information management, to differentially monitor system performance associated with information management, or a combination thereof.

18. The method of claim 17, wherein said method further comprises dynamically adjusting performance of at least one information manipulation task related to said information management based on at least one of said monitored resource consumption, said monitored system performance, or a combination thereof.

19. The method of claim 17, further comprising configuring a new information management system or re-configuring an existing information management system based at least in part on said monitored resource consumption, said monitored system performance, or a combination thereof.

20. The method of claim 1, wherein said information management system is coupled to a network at a point outside a core of said network.

21. The method of claim 1, wherein said information management system comprises a network endpoint information management system.

22. The method of claim 1, wherein said information management system comprises a content delivery system.

23. The method of claim 1, wherein said information management system comprises a network endpoint content delivery system.

24. The method of claim 1, wherein said differentiated service comprises differentiated business service.

25. The method of claim 1, wherein said differentiated service comprises differentiated information service.

26. A method of providing differentiated service in an information management environment, comprising differentially monitoring system performance associated with information management within an information management system.

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27.   The method of claim 26, wherein said differentially monitoring system performance comprises differentially monitoring one or more system performance parameters within said information management.

28.   The method of claim 26, wherein said method comprises differentially monitoring said system performance on at least one of a real time basis, historical basis, or a combination thereof.

29.   The method of claim 27, wherein said one or more system performance parameters comprise at least one of resource availability, resource usage, adherence to provisioned system service parameters, content usage patterns, time of day access patterns, or a combination thereof.

30.   The method of claim 27, further comprising monitoring said system performance parameters in a manner based at least in part on one or more class identification parameters associated with said information management, based at least in part on one or system service parameters associated with said information management, or a combination thereof.

31.   The method of claim 30, wherein said information system comprises a content delivery system; wherein said information management comprises content delivery; and wherein said method comprises monitoring at least one of information related to operating or usage characteristics of an content delivery system, subsystems or resources; monitoring processing of individual content delivery requests or classes of content delivery requests, or a combination thereof; wherein said one or more class identification parameters comprise at least one of identity or class of user or request, type of request, resource requirement associated with fulfillment of a particular request, or a combination thereof; wherein said system service parameters comprise at least one of aggregate bandwidth ceiling, service level agreement policy, admission control policy, processing resource allocation policy, storage resource allocation policy, or a combination thereof; and wherein said one or more system performance parameters comprise at least one of resource availability, resource usage, adherence to provisioned system service parameters, content usage patterns, time of day access patterns, or a combination thereof.

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32. The method of claim 27, wherein said method comprises monitoring at least one of operating or usage characteristics of an information management system, subsystems or resources; monitoring information related to processing of individual information management requests or classes of information management requests; or a combination thereof.

33. The method of claim 27, wherein said method comprises monitoring at least one of SLA conformance information, performance level information, or a combination thereof.

34. The method of claim 27, wherein said method comprises monitoring at least one of system resource utilization metrics, application performance data, SLA performance data, or a combination thereof.

35. The method of claim 27, wherein said method further comprises reporting said monitored information for further processing; wherein said monitored information is reported to a subsystem of said system, to another system, or a combination thereof.

36. The method of claim 27, wherein said method further comprises reporting said monitored information to one or more physically remote located systems or external entities for further processing.

37. The method of claim 27, wherein said method comprises monitoring consumption or use of one or more system resources.

38. The method of claim 27, wherein said method comprises monitoring said system performance parameters on at least one of per-subscriber basis, per-request basis, per transaction basis, per-class basis, per-tenant basis, per use basis, per relative resource consumption basis, per percentage-service guarantee basis, per time of day access basis, or a combination thereof.

39. The method of claim 27, wherein said information system comprises a content delivery system; wherein said information management comprises content delivery; and wherein said method comprises monitoring at least one of allocated sustained and peak bandwidth per subscriber, percentage of time at or below sustained bandwidth level,

percentage of time above sustained bandwidth level and at or below peak bandwidth level, or a combination thereof.

40. The method of claim 27, wherein said information system comprises a content delivery system; wherein said information management comprises content delivery; and wherein said method comprises monitoring identity or disposition of requests for content.

41. The method of claim 40, wherein said method comprises monitoring at least one of record of content requests honored, record of content requests rejected, record of content requests by subscriber, record of individual content request start time and corresponding content request fulfillment finish time, or a combination thereof.

42. The method of claim 27, further comprising dynamically adjusting information management processing behavior based on said one or more monitored system performance parameters.

43. The method of claim 30, further comprising monitoring said system performance parameters in a manner based at least in part on one or more system service parameters associated with said information management; and dynamically adjusting information management processing behavior based on said one or more monitored system performance parameters to bring system performance into adherence with said one or more of said system service parameters.

44. The method of claim 27, wherein said information management system has a deterministic system architecture that comprises a plurality of distributively interconnected processing engines.

45. The method of claim 44, wherein said information management system comprises a content delivery system.

46. The method of claim 44, wherein said information management system comprises a network endpoint content delivery system.

47.   The method of claim 44, wherein said plurality of distributively interconnected processing engines comprises a system management processing engine, and wherein said method further comprises using said system management processing engine to monitor said one or more system performance parameters.

48.   The method of claim 44, wherein one or more of said processing engines comprises a monitoring agent capable of monitoring resource consumption within or by said processing engines, and wherein said system architecture further comprises a system monitor in communication with said monitoring agent that is capable of performing system management to differentially monitor said resource consumption.

49.   The method of claim 44, wherein at least one of said plurality of processing engines is located physically remote from at least one other of said plurality of processing engines; and wherein two or more of said plurality of processing engines comprise at least one of separate components of a data center, separate components of a cluster of information management systems, separate processing engines that are distributively interconnected across a network, or a combination thereof.

50.   The method of claim 49, wherein said plurality of processing engines are distributively interconnected across a network, and include a system management processing engine and at least one of a storage management processing engine, an application processing engine, or a combination thereof; wherein said system management processing engine is located at a physically remote location from at least one of said storage management processing engine or said application processing engine; and wherein said method further comprises using said system management processing engine to monitor said system performance parameters.

51.   The method of claim 27, wherein said information management system comprises at least one of a content delivery node, application serving node, or a combination thereof.

52.   The method of claim 27, wherein said information management system comprises at least one of an origin storage node, an edge storage node, an origin application serving node, an edge application serving node, an edge caching node, an edge content replication node, or a combination thereof.

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53.   The method of claim 27, wherein said information management system is coupled to a network at a point outside a core of said network.

54.   The method of claim 27, wherein said information management system comprises a network endpoint information management system.

55.   The method of claim 27, wherein said information management system comprises a content delivery system.

56.   The method of claim 55, wherein said information management system comprises a network endpoint content delivery system.

57.   The method of claim 26, wherein said differentiated service comprises differentiated business service.

58.   The method of claim 26, wherein said differentiated service comprises differentiated information service.

59.   A method of providing differentiated service in an information management environment, comprising differentially monitoring resource consumption associated with information management within an information management system.

60.   The method of claim 59, wherein said method comprises monitoring said resource consumption within an information management system on at least one of a real time basis, historical basis, or a combination thereof.

61.   The method of claim 59, wherein said method further comprises monitoring shared system resource consumption associated with at least one of a particular request for information management, a particular user requesting information management, or a combination thereof.

62.   The method of claim 59, wherein said method further comprises monitoring shared system resource consumption associated with a particular information manipulation task.

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63. The method of claim 59, further comprising monitoring said resource consumption in a manner based at least in part on one or more class identification parameters associated with said information management, based at least in part on one or system service parameters associated with said information management, or a combination thereof.

64. The method of claim 59, wherein said monitored resource consumption comprises at least one of application level information, system resource level information, or a combination thereof.

65. The method of claim 61, wherein said information system comprises a content delivery system; wherein said information management comprises content delivery; and wherein said monitoring comprises monitoring at least one of CPU processing cycle consumption, storage block retrieval consumption, system bandwidth consumption, or a combination thereof.

66. The method of claim 59, wherein said method further comprises reporting said monitored information for further processing; wherein said monitored information is reported to a subsystem of said system, to another system, or a combination thereof.

67. The method of claim 59, wherein said method further comprises reporting said monitored information to one or more physically remote located systems or external entities for further processing.

68. The method of claim 59, wherein said method further comprises dynamically adjusting information management processing behavior based on said monitored resource consumption.

69. The method of claim 63, wherein said method further comprises monitoring said resource consumption based at least in part on one or system service parameters associated with said information management; and dynamically adjusting information management processing behavior based on said monitored resource consumption to bring system resource consumption into adherence with said one or more system service parameters.

70.   The method of claim 59, wherein said information management system has a deterministic system architecture that comprises a plurality of distributively interconnected processing engines.

71.   The method of claim 70, wherein said information management system comprises a content delivery system.

72.   The method of claim 70, wherein said information management system comprises a network endpoint content delivery system.

73.   The method of claim 70, wherein said plurality of distributively interconnected processing engines comprises a system management processing engine, and wherein said method further comprises using said system management processing engine to differentially monitor said resource consumption.

74.   The method of claim 73, wherein one or more of said processing engines comprises a monitoring agent capable of monitoring resource consumption within or by said processing engines, and wherein said system architecture further comprises a system monitor in communication with said monitoring agent that is capable of performing system management to differentially monitor said resource consumption.

75.   The method of claim 70, wherein at least one of said plurality of processing engines is located physically remote from at least one other of said plurality of processing engines; and wherein two or more of said plurality of processing engines comprise at least one of separate components of a data center, separate components of a cluster of information management systems, separate processing engines that are distributively interconnected across a network, or a combination thereof.

76.   The method of claim 75, wherein said plurality of processing engines are distributively interconnected across a network, and include a system management processing engine and at least one of a storage management processing engine, an application processing engine, or a combination thereof; wherein said system management processing engine is located at a physically remote location from at least one of said storage management processing engine or said application processing engine; and wherein said method further

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comprises using said system management processing engine to differentially monitor said resource consumption.

77.   The method of claim 59, wherein said information management system comprises at least one of a content delivery node, application serving node, or a combination thereof.

78.   The method of claim 59, wherein said information management system comprises at least one of an origin storage node, an edge storage node, an origin application serving node, an edge application serving node, an edge caching node, an edge content replication node, or a combination thereof.

79.   The method of claim 59, wherein said information management system is coupled to a network at a point outside a core of said network.

80.   The method of claim 59, wherein said information management system comprises a network endpoint information management system.

81.   The method of claim 59, wherein said information management system comprises a content delivery system.

82.   The method of claim 81, wherein said information management system comprises a network endpoint content delivery system.

83.   The method of claim 59, wherein said differentiated service comprises differentiated business service.

84.   The method of claim 59, wherein said differentiated service comprises differentiated information service.

85.   A method of providing differentiated service in an information management environment, comprising verifying service level performance of an information management system by differentially monitoring system performance within said information management system.

86. The method of claim 85, wherein said differentially monitoring system performance comprises differentially monitoring one or more system performance parameters within said information management.

87. The method of claim 85, wherein said information management system is coupled to a network at a point outside a core of said network.

88. The method of claim 85, wherein said information management system comprises a network endpoint information management system.

89. The method of claim 85, wherein said information management system comprises a content delivery system.

90. The method of claim 85, wherein said information management system comprises a network endpoint content delivery system.

91. The method of claim 86, wherein said information system comprises a content delivery system; wherein said information management comprises content delivery; and wherein said one or more system performance parameters comprise at least one of resource availability, resource usage, adherence to provisioned system service parameters, content usage patterns, time of day access patterns, or a combination thereof.

92. The method of claim 91, wherein said method comprises monitoring said system performance parameters on at least one of per-subscriber basis, per-request basis, per transaction basis, per-class basis, per-tenant basis, per use basis, per relative resource consumption basis, per percentage-service guarantee basis, per time of day access basis, per subsystem basis, per system basis, or a combination thereof.

93. The method of claim 91, wherein said information management system manages information for two or more tenants, wherein at least one of said tenants supports two or more classes of service, and wherein at least one of said classes of service is subscribed to by two or more subscribers; and wherein said method comprises monitoring said system

performance parameters on each of a system basis, per tenant basis, per class basis, and per subscriber basis.

94. The method of claim 91, wherein said method comprises monitoring said system performance parameters at the level of a particular subscriber of a particular multiple-subscriber class of a particular multiple-class tenant of a particular multiple-tenant system.

95. The method of claim 92, wherein said method further comprises generating service level performance verification information based on said monitored system performance parameters.

96. The method of claim 95, wherein said method further comprises generating billing information based at least in part on said service level performance verification information.

97. The method of claim 91, wherein said method further comprises reporting said monitored system performance parameters to one or more physically remote located systems or external entities for further processing.

98. The method of claim 97, wherein said further processing comprises generating service level performance verification information based on said monitored system performance parameters.

99. The method of claim 98, wherein said method further comprises generating billing information based at least in part on said service level performance verification information.

100. The method of claim 85, further comprising dynamically adjusting information management processing behavior based on said one or more monitored system performance parameters.

101. The method of claim 85, further comprising dynamically adjusting information management processing behavior based on said monitored system performance to bring said system performance into adherence with one or more service level policies.

102.   The method of claim 101, wherein said dynamically adjusting information management processing behavior comprises managing at least one of system admission control, resource allocation within said system, information request queue prioritization, transfer of information requests to other systems, or a combination thereof.

103.   The method of claim 102, wherein said information management system comprises a content delivery system.

104.   The method of claim 102, wherein said information management system comprises a network endpoint content delivery system.

105.   The method of claim 85, wherein said differentiated service comprises differentiated business service.

106.   The method of claim 85, wherein said differentiated service comprises differentiated information service.

107.   A system comprising an information management system capable of differentially monitoring resource consumption associated with information management within said information management system, differentially monitoring system performance associated with information management within said information management system, or a combination thereof.

108.   The system of claim 107, wherein said system comprises a plurality of processing engines that are distributively interconnected.

109.   The system of claim 108, wherein said system comprises a content delivery system, and wherein said plurality of processing engines comprise a system management processing engine, a storage management processing engine, and an application processing engine.

110.   The system of claim 109, wherein said content delivery system comprises a network endpoint content delivery system.

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